

C L A I M S

What is claimed is:

1. Exercise equipment comprising, in combination:

(a) a frame structure;

(b) at least one handle coupled to the frame structure and adapted for movement by a user in a first direction and in an opposite second direction;

(c) a weight, arranged on the frame structure and coupled to the handle, for applying a gravitational force to the handle in said second direction contrary to movement in said first direction, wherein said weight is lifted upwards when the handle is moved by a user in said first direction; and

(d) spring means having two ends, coupled to said handle at one end and to the frame structure at the opposite end, for applying a spring force to the handle in said second direction in addition to the gravitational force applied by said weight, such that, when the handle is

rapidly moved by the user in the first direction and then suddenly moved in the second direction, the total force applied to the handle in the second direction always exceeds a prescribed minimum value.

2. The exercise equipment recited in claim 1, wherein said weight includes a plurality of individual weights that may be added and removed to adjust the gravitational force applied to the handle.

3. The exercise equipment recited in claim 2, wherein said individual weights each weigh the same, and a plurality of said weights may be applied to the handle at the same time.

4. The exercise equipment recited in claim 2, wherein said individual weights do not weigh the same.

5. The exercise equipment recited in claim 1, wherein said spring means is removably coupled to said handle and to said frame structure, such that individual ones of the spring means may be added and removed to adjust the spring force applied to the handle.

6. The exercise equipment recited in claim 5, wherein individual ones of said spring means have substantially the same spring constant, and a plurality of said spring means may be coupled to said at least one weight and said frame structure at the same time.

7. The exercise equipment recited in claim 5, wherein individual ones of said spring means have a different spring constant.

8. The exercise equipment recited in claim 1, wherein said spring means is a tension spring.

9. The exercise equipment recited in claim 8, wherein said spring means is an elastic band.

10. The exercise equipment received in claim 8, wherein said spring means is a coil spring.

11. The exercise equipment recited in claim 1, wherein said spring means is a compression spring.

12. The exercise equipment recited in claim 11, wherein said spring means is a coil spring.

13. The exercise equipment recited in claim 11, wherein said spring means is a pneumatic spring.

14. Exercise equipment comprising, in combination:

(a) a frame structure having at least one cable exit point;

(b) a cable having a proximal end and a distal end, the cable passing through said cable exit point with the proximal end of the cable being attached to a handle that enables a user to pull the cable in a direction away from the frame structure;

(c) a weight, arranged within the frame structure and coupled to the distal end of the cable, for applying a tensile force to the cable such that, when the handle and the proximal end of the cable are pulled by a user, said weight is lifted upwards; and

(d) spring means, coupled to said weight and to the frame structure, for applying a downward spring force to said weight such that, when the proximal end of the cable is rapidly pulled by the user and then suddenly released, the tensile force on the cable always exceeds a prescribed value which is sufficient to keep the cable taught.

15. The exercise equipment recited in claim 14, wherein said weight includes a plurality of individual weights that may be added and removed to adjust the tensile force applied to the handle.

16. The exercise equipment recited in claim 14, wherein said spring means is adapted to be added and removed to adjust the spring force applied to the handle.